

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) An apparatus for forwarding packets, comprising:
 - a plurality of inputs configured to receive respective incoming streams of data packets;
 - a plurality of outputs configured to transmit respective outgoing streams of data packets;
 - packet forwarding logic configured to form outgoing streams of data packets from the data packets contained in the incoming streams, using destination address information contained in the data packets of the incoming streams; [[and]]
 - redundancy logic configured to transmit a first outgoing stream of data packets formed by the packet forwarding logic to a first output and a second output and further configured to discard data packets contained in a selected incoming stream from one of a first input or a second input before the data packets contained in the selected incoming stream are included in any outgoing data streams;
 - a first service module to process data packets contained in the first outgoing stream; and
 - a second service module to process data packets contained in the first outgoing stream, wherein each of the first and second service modules maintains identical state information based upon state information obtained from the data packets contained in the first outgoing stream.

2-4. (canceled)

5. (currently amended) The apparatus of claim [[3]] 1, wherein the redundancy logic designates one of the first service module or the second service module to be primary and the other to be secondary and discards data packets contained in the incoming stream from the one of the first or second service modules that is secondary.

6. (original) The apparatus of claim 5, wherein the first service module is initially designated to be primary.

7. (currently amended) The apparatus of claim 6, wherein, upon receiving an indication that the first service module has failed and an indication that the second service module is operational, the redundancy logic designates the second service module to be primary and the first service module to be secondary.

8. (canceled)

9. (previously presented) The apparatus of claim 1, wherein the redundancy logic comprises multicast logic for duplicating specified data packets for output to the plurality of outputs.

10. (currently amended) A method of forwarding data packets, comprising:
forming a first data stream from received data packets;

transmitting the first data stream to both a first service module and a second service module, wherein ~~a respective~~ identical state information is maintained in each of the first and second service modules based upon state information obtained from the transmitted first data stream;

receiving an indication of whether the first service module has failed;

if the indication indicates that the first service module has not failed, discarding packets processed by the second service module; and

if the indication indicates that the first service module has failed, discarding packets processed by the first service module.

11. (canceled)

12. (currently amended) The method of claim 10, further comprising:

initially designating the first service module to be active, and

designating the second service module to be active if the indication indicates that the first service module has failed and the second service module is determined to be operational.

13. (original) The method of claim 10, further comprising:

if the indication indicates that the first service module has not failed, forming outgoing streams from at least data packets processed by the first service module.

14. (original) The method of claim 13, further comprising:

if the indication indicates that the first service module has failed, forming outgoing streams from at least data packets processed by the second service module.

15. (currently amended) A controller, comprising:

packet forwarding logic configured to forward a stream of [[data]] packets to first and second service modules, each of the first and second service modules to obtain identical state information from the packets, wherein the packet forwarding logic uses destination address information within the [[data]] packets to form the stream;

selection logic configured to select one of the first or second service modules based on a status signal indicating whether the first service module has failed; and

discard logic configured to discard [[data]] packets processed by the first service module if the status signal indicates that the first service module has failed and to discard [[data]] packets processed by the second service module if the status signal indicates that the first service module has not failed.

16. (currently amended) An interface module usable in a system for forwarding packets, comprising:

an ingress port for receiving an incoming stream of data packets;

a transfer unit configured to transmit the data packets contained in the received incoming stream to each of a plurality of forwarding planes connectable to the interface module, wherein ~~a respective~~ identical state information is maintained in two or more of the plurality of forwarding planes based upon state information obtained from the transmitted data packets;

an egress port for transmitting an outgoing stream of data packets; and

a switchover unit configured to select one of the plurality of forwarding planes connectable to the interface module and to form the outgoing stream of data packets from data packets received from the selected forwarding plane.

17. (original) The interface module of claim 16, wherein the switchover unit selects one of the plurality of forwarding planes in response to receipt of a signal indicating the status of one or more of the plurality of forwarding planes.

18. (currently amended) A system for forwarding packets, comprising:
first and second forwarding planes, each configured to receive [[data]] packets from a plurality of interface modules and transmit received [[data]] packets to a plurality of interface modules, wherein the first and second forwarding planes maintain ~~a respective~~ identical state information based upon state information obtained from the received [[data]] packets; and
a first interface module coupled to the first and second forwarding planes, the first interface module receiving [[data]] packets contained in an incoming stream at an ingress port and transmitting the [[data]] packets to the first forwarding plane and the second forwarding plane, the first interface module further receiving [[data]] packets from each of the first and second forwarding planes and transmitting at an egress port [[data]] packets from a selected one of the first and second forwarding planes.

19. (original) The system of claim 18, further comprising:
a routing engine, coupled to each of the first and second forwarding planes, for computing route information using routing protocols.

20. (currently amended) The system of claim 19, wherein each of the first and second forwarding planes forwards received [[data]] packets for transmission based on address information contained in respective [[data]] packets and route information computed by the routing engine.

21. (previously presented) The system of claim 18, wherein the first interface module selects one of the first or second forwarding planes in response to a signal indicating the status of one or more of the forwarding planes.

22. (new) The system of claim 19, wherein the state information comprises configuration information associated with the routing engine.

23. (new) The system of claim 18, wherein the received packets comprise at least one of data packets or control packets.

24. (new) The apparatus of claim 1, wherein the state information obtained from the data packets comprises historical state information.

25. (new) The controller of claim 15, wherein the packets comprise at least of data packets or control packets.

26. (new) The controller of claim 15, wherein the selection logic is further configured to check a status of the second service module before selecting the second service module when the status signal indicates that the first service module has failed.